

## CLAIMS

1. A method of making an unfired refractory component that is resistant to reaction with molten aluminum or magnesium,  
5 comprising:
- (a) forming a slurry comprising calcium silicate-containing refractory material and a barium- or strontium-containing compound;
  - (b) placing the slurry in a mould;
  - 10 (c) dewatering the slurry to form the component; and
  - (d) hydrothermally processing the component to form a final product.
2. A method according to claim 1 wherein the barium- or  
15 strontium-containing compound is a barium-containing compound selected from barium sulphate, barium oxide and barium hydroxide.
3. A method according to claim 2 wherein the barium sulphate  
20 is a powder or a slurry.
4. A method according to claim 2 wherein the barium oxide or the barium hydroxide is an aqueous solution.
- 25 5. A method according to claim 4 wherein the aqueous solution is prepared with water at a temperature of at least 30°C.
6. A method according to claim 4 wherein the aqueous solution  
30 is prepared with water at a temperature of at least 40°C.

7. A method of stabilizing a silica-containing porous refractory component against reactions with molten aluminum or magnesium, comprising:

- (a) forming an aqueous solution of an oxide or hydroxide of a group II alkali earth;
- (b) impregnating the component with the solution; and
- (c) drying the impregnated component in air.

8. A method according to claim 8 wherein the group II alkali earth is selected from barium and strontium.

9. A method according to claim 8 further comprising impregnating the component with a sulphuric acid solution and drying the component in air, after step (c).

10. A method according to claim 8 wherein the porous refractory component is a fired component.

11. A method according to claim 8 wherein the porous refractory component is an unfired component.

12. A method according to claim 8 wherein the aqueous solution is formed at a temperature of at least 30°C.

13. A method according to claim 8 wherein the aqueous solution is formed at a temperature of at least 40°C.